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Optix Annual Fleet Safety Report 2022

Formerly DriveRisk

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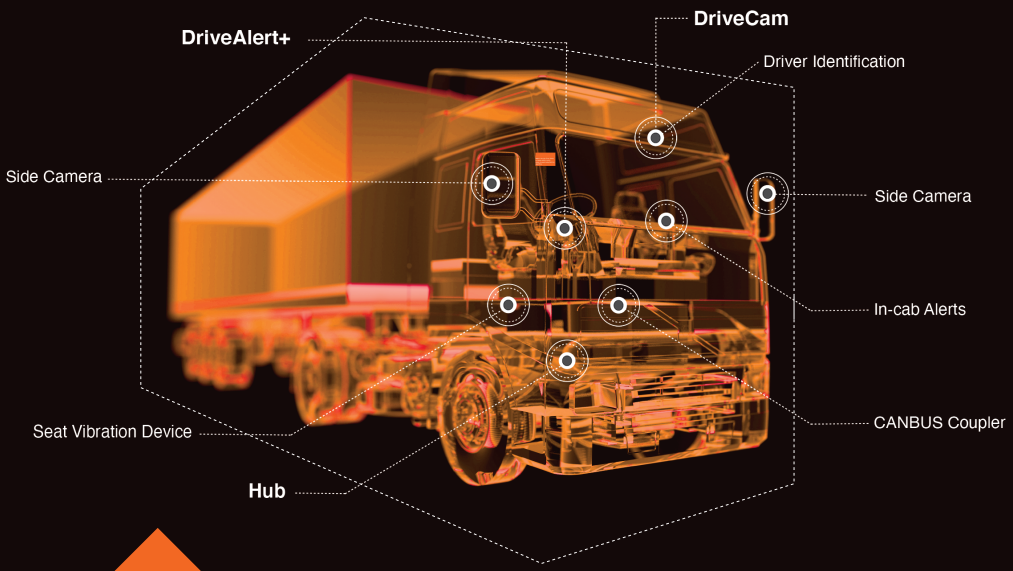


How it works

The DriveAlert+ and DriveCam work together in the cab to detect alertness and distraction. The DriveAlert+ alarms to inform the driver potential fatigue has been detected using an audible message and seat vibration device.

Events are uploaded to the Lytx Driver Safety Program- a cloud based platform which automatically reviews the event using Machine Review and A.I Algorithms.

Drive Alert events are filtered and human -reviewed by the 24/7 Optix Early Warning Centre to ensure a quick review and turnaround of genuine driver alertness issues.

The Early Warning Centre will contact the Driver's Fleet Manager by phoning, email and/or sms within minutes of the detection to a critical event.

Content

Introduction

In 2021, we made our mark by releasing the first annual DriveRisk Risk Report – an exciting opportunity to share meaningful safety and driving behaviour insights from fleets across Australia's transport industry. Spanning a wide range of sub-catagories, we have gathered an incredible amount of data over this past year, further building on concepts introduced in the 2021 edition.

In 2022, updates to the Lytx DriveCam's Machine Vision + Artificial Intelligence (MV+AI) capabilities enabled it to better identify specific behaviours. From 2021 to 2022, the frequency of Inattention and Mobile Phone behaviours increased 117% and 88% respectively, while Food or Drink behaviours tripled year-on-year.

These latest technological advances have exposed behaviours that had not previously attracted attention, giving our clients further visibility into the root causes of their fleet's on-road risks.

A word from our Directors

Last year, we proudly launched the first edition of our Annual Risk Report showcasing key stats and driver behaviour insights from 2021. This year we've scaled up, and announce a new organisational direction, an evolution, to meet the demands of a quickly-advancing world.

As such, we're proud to introduce the rebrand of DriveRisk to Optix. As our clients grow and evolve, so do we - allowing us to meet all of your changing requirements.

The name 'Optix' has been purposefully chosen, for its parallels with sight and behaviour and its alignment for us, in having 360° vision on the road, through hi-tech monitoring safety systems.

While our name, look and feel have changed, our vision hasn't. In fact, it is even more committed to achieving zero fatalities on Australian roads and we're not going to stop until we reach and maintain it. Together with your continued support, we can turn this into a reality and improve road safety for all Australians.

In looking forward, we must also look at the past. And our new Fleet Safety Report highlights some serious driver behaviours trends that have increased - for example, an increase in events capture by almost 20%. We don't believe driver attitudes have changed however, the advances in technology and its increased accessibility continues to create heightened safety concerns. It is our role to continue empowering you with the information to be able to influence these behaviours.

It's shocking to view High-Risk Behaviours and Unsafe Behaviours having substantial increases in recorded events across the board, comparing year on year. Consumption of Food or Drink, the most staggering, with a 338% increase from 2021, also alarming, an increase in Distracted Driving or Inattentiveness, up 132% year on year. This can be partially attributed to improved A.I technology, but the Inattention of this is unfortunately human driven.

These reports are instrumental in our understanding of Road Safety in Australia and how we need to change. We need widespread adoption, and we need commitment and disciplined follow through. Together we can effect change, and together we can achieve our vision of zero fatalities on Australian roads.

We're committed to this journey, so let's continue together, to get all Australians home safely.

Owen, Craig

Key Takeaways

1. Food or Drink behaviours comprise more than 1/2 of all identified Distraction behaviours, however, Inattention and Mobile Phone use contributed to almost 1/5 of all Near Collision outcomes.

2. Behaviours categorised as Driving Fundamentals (Following Distances, Failing to Maintain Space Around Vehicle) remain the key contributors to Near Collision outcomes and a key indicator of Collision Risk. Almost 2/3 of all Near Collisions were a result of a Fundamentals behaviour .

3. 3/4 of Near Collision outcomes, and 2/3 of Collisions occurred within a major metropolitan area.

4. On a large scale, drivers exhibit a higher amount of risk on Fridays (closely followed by Tuesdays), than any other day of the week.

5. Widespread adoption of A.I detection from 2021 to 2022 provided greater visibility into the prevalence of High-Risk behaviours, capturing these instances 1.7x sooner than before.

2022 Overview

Throughout 2021, the data we collected indicated that on average each vehicle captured:

- An event every 1.6 days
- An event featuring an Unsafe behaviour every 20 days and
- An event featuring a High-Risk behaviour every 54 days.

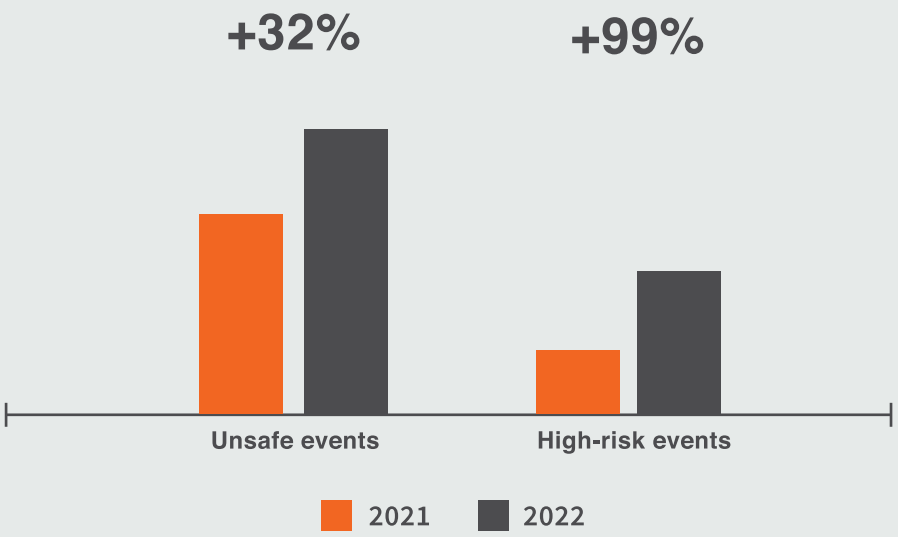
In 2022 however, the data that we collected indicates that on average each vehicle captured:

- An event every 1.5 days
- An event featuring an Unsafe behaviour every 18 days and
- An event featuring a High-Risk behaviour every 31 days.

From 2021 to 2022 a 13% increase was observed in devices operating in the field, proportionately increasing total event capture by 19%.

We also observed a 32% increase in events featuring Unsafe behaviours (deemed as 'coachable' or requiring coaching by our respective clients). However, it was our analysis of events that revealed a 99% increase in High-Risk behaviours, the reasons for which we will explore further in this report.

As our technological capability improves, we're better able to identify and capture more meaningful behaviours, more often. This trend appears largely driven by advances in technology, rather than a widespread change in driving attitudes.



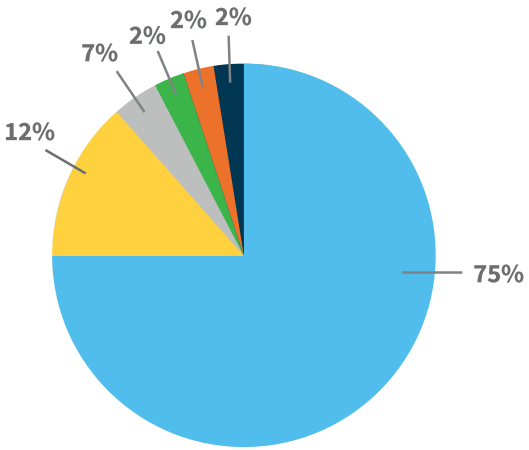
Top Behaviour Groups & Trends

Of the 1.7 million video events collected throughout 2022, over 530,000 of these instances demonstrated the driver exhibiting an identifiable behaviour.

Once again in 2022, distraction-related behaviours are proving to be at the forefront of High-Risk behaviour groups, mirroring 2021 data results.

High-Risk Behaviour Groups 2022

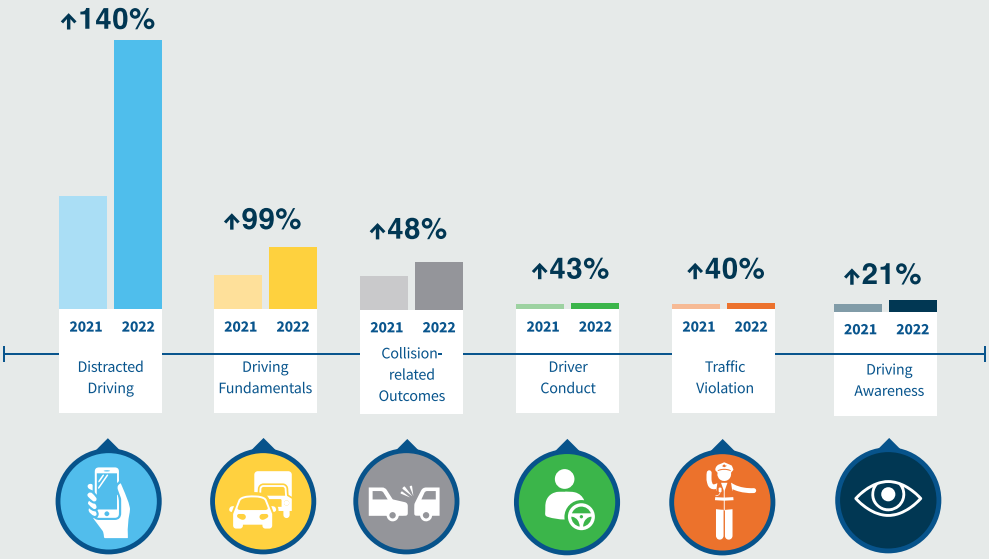
- Distracted Driving
- Driving Fundamentals
- Collision-related Outcomes
- Driver Conduct
- Traffic Violation
- Driving Awareness



Our data revealed a total behaviour capture increase of 30% from 2021 to 2022, which was largely attributed to the implementation of the A.I feature across many clients' fleets.

The direct impact that these updates features had on the 'High-Risk' behaviour groups highlighted the following year on year trends:

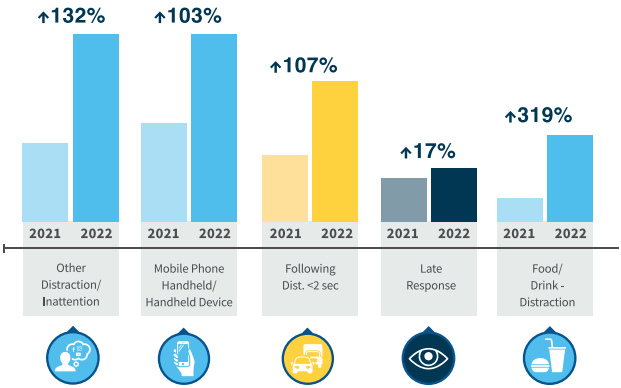
High-Risk Behaviour Groups Year on Year



High-Risk vs. Unsafe Behaviour Trends

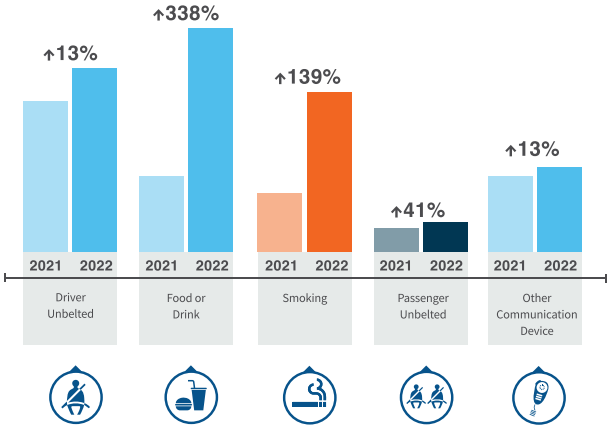
With advancements in the ability to identify behaviours through Artificial Intelligence, results showed a huge increase in the number of events captured from 2021 to 2022. High-Risk behaviours such as Inattention, Handheld Device and Following Distance appear to have increased at a relatively similar rate, however the standout increase was across the Food/Drink - Distraction, which showed a 319% increase in captured events year on year. These four behaviours all fall within the scope of A.I detection.

Top 5 'High-Risk' Behaviours Year on Year



When looking at our Unsafe behaviours, No Seatbelt also falls within the scope of A.I detection. However, given that we only observed a 13% increase year on year implies that this may well be a direct result of improvements in driving attitudes.

Top 5 'Unsafe' Behaviours Year on Year



Distraction Focus

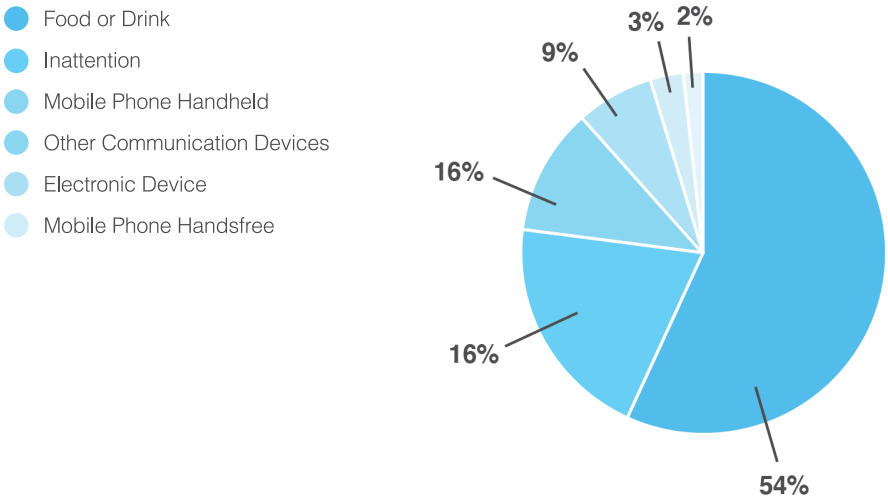
A 'Distraction' can be defined as "anything that directs one's attention away from something else".
In this context the 'something else' represents the driving task, and the 'anything' represents the type of identifiable distraction.

Looking holistically at the Distraction behaviour category, Food or Drink type behaviours comprise more than 50%.

Of all Food or Drink behaviours, more than 54% are deemed to carry no collision-leading risk. Food or Drink related behaviours were identified in only 1% of all events that resulted in a Near Collision outcome.

Conversely, collision-leading risk associated with Inattention and Mobile Phone behaviours is far more significant. These behaviours were respectively identified in 15% and 2% of events that resulted in a Near Collision outcome.

Distraction Behaviours Captured in 2022



Fundamentals Focus

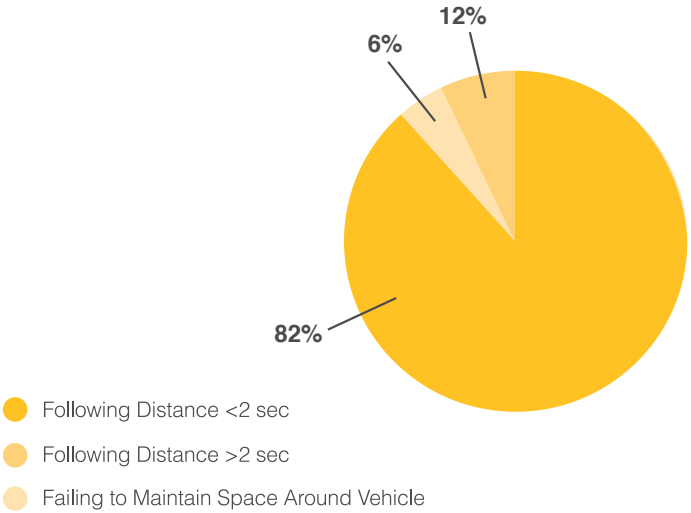
Throughout 2022 the most prevalent Driving Fundamentals behaviour was ‘High-Risk’ Following Distance, where drivers have maintained a distance to the vehicle ahead of them of less than 2 seconds. Events featuring this type of behaviour comprised 82% of the Fundamentals category.

From 2021 to 2022, we observed a 107% increase in the total number of High-Risk Following Distance events captured. This is largely as a direct result of the enhanced capability of A.I, which was adopted by many of our clients throughout the past 12 months.

Data showed that more often than not, High-Risk Following Distance events did not result in a high-severity outcome (such as a Near Collision or Collision). However, these captured behaviours do serve as a valuable leading indicator of ingrained habits that can be improved with effective coaching.

While 'Failing to Maintain Space Around Vehicle' only comprises 6% of Fundamental behaviours, the risk of this behaviour is much higher. Data shows that 98% of 'Failing to Maintain Space Around Vehicle' behaviours resulted in a Near Collision outcome.

Fundamental Behaviours Captured in 2022

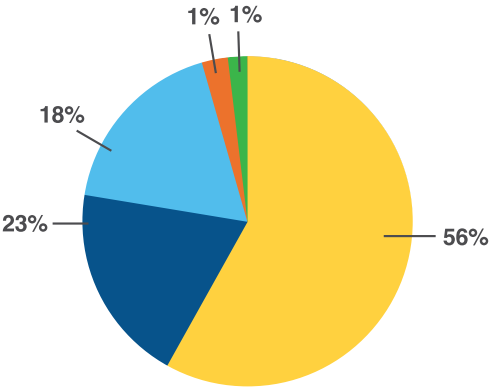


Near Collision Analysis

The most prevalent behaviour type that led to Near Collision in 2022 were Driving Fundamentals, which made up more than 50%. Awareness and Distractions followed, at 23% and 18% respectively. These figures closely mirror 2021 results.

Behaviour Groups Associated with Near Collision Outcomes

- Driving Fundamentals
- Driving Awareness
- Distracted Driving
- Traffic Violation
- Driver Conduct

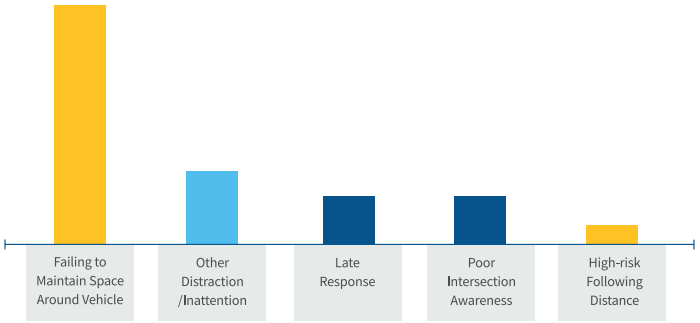


Of the Fundamental behaviours, 'Failing to Maintain Space Around Vehicle' was identified in 3.7x more Near Collision events than the next most prevalent behaviour (Inattention).

In fact, 'Failing to Maintain Space Around Vehicle' on its own was 1.5x more prevalent in events resulting in a Near Collision outcome than the sum of the remaining top 5 contributing behaviours.

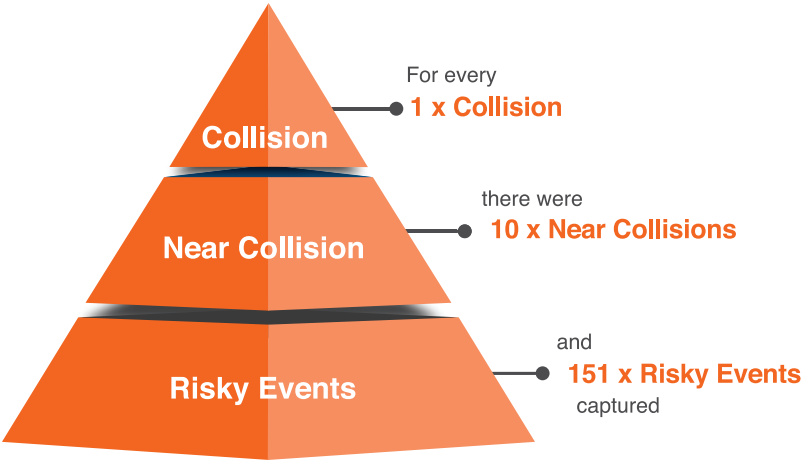
Interestingly, vehicle occupants were found to be unbelted in 7% of events resulting in a Near Collision.

Top Behaviours Associated with Near Collision Outcomes



Near Collision Analysis

Risky Events are the most important leading indicator of Near Collisions, and Near Collisions are the most important leading indicator of Collisions. By addressing the behaviours identified in Risky Events, the subsequent Near Collision and Collision outcomes can be prevented.

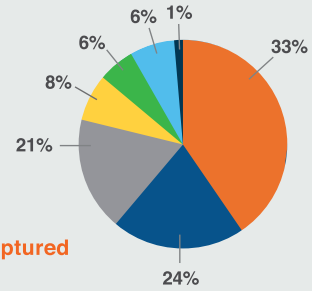


Near Collision & Collision Outcomes by Major City

Of the total number of events featuring Near Collision outcomes captured throughout 2022:

- **33%** were captured in **Sydney**
- **21%** were captured in **Melbourne**
- **8%** were captured in **Brisbane**
- **6%** were captured in **Adelaide**
- **6%** were captured in **Perth**
- **1%** were captured in **Canberra**

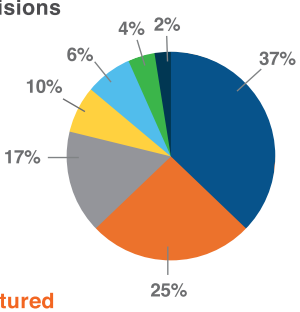
24% of Near Collision outcomes were captured outside of major metropolitan areas.



Similarly, of the total number of Collisions captured throughout 2022:

- **25%** were captured in **Sydney**
- **17%** were captured in **Melbourne**
- **10%** were captured in **Brisbane**
- **6%** were captured in **Perth**
- **4%** were captured in **Adelaide**
- **2%** were captured in **Canberra**

37% of Collision outcomes were captured outside of major metropolitan areas.



Collisions

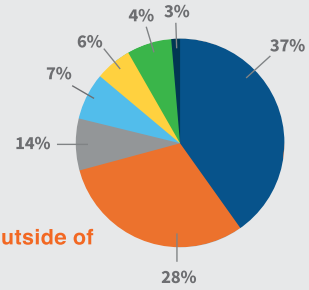
- Outside of major cities
- Sydney
- Melbourne
- Brisbane
- Perth
- Adelaide
- Canberra

As a benchmark, of the total number of all events captured throughout 2022:

- **28%** were captured in **Sydney**
- **14%** were captured in **Melbourne**
- **7%** were captured in **Perth**
- **6%** were captured in **Brisbane**
- **4%** were captured in **Adelaide**
- **3%** were captured in **Canberra**

37% of total events were captured outside of major metropolitan areas.

Given that traffic density & congestion is much higher in a metropolitan environment, this appears to directly influence the likelihood of a collision occurring.



Total Events

- Outside of major cities
- Sydney
- Melbourne
- Brisbane
- Perth
- Adelaide
- Canberra

Region Location Maps

Regions depicted via the maps show the reporting area.
This is not limited to CBD centres, it includes the greater area.

Melbourne

Sydney

Brisbane

Adelaide

Perth

Canberra

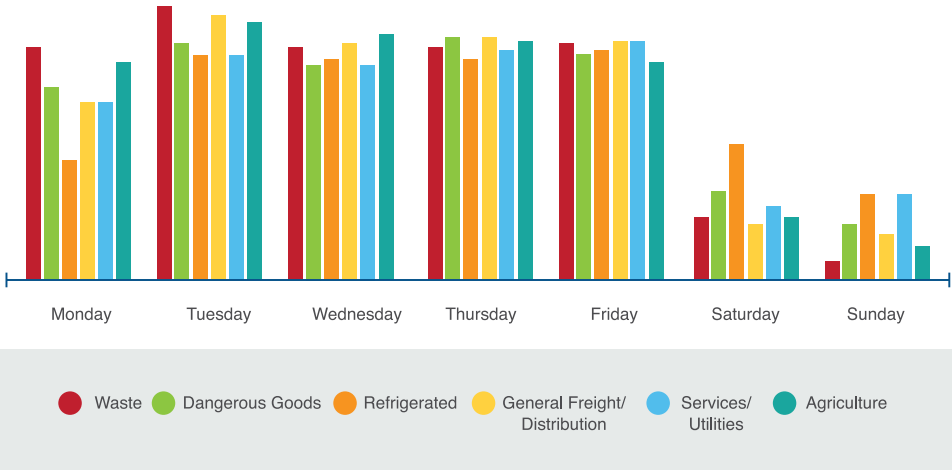
Risk by Day of Week

The highest concentration of risk across all of our accounts throughout 2022 was captured on a **Friday** between **12-1pm.**

Each of the key industry segment's respective riskiest hour is highlighted below:

Waste	Dangerous Goods	Refrigerated Transport	General Freight/ Distribution	Services & Utilities	Agriculture
Tuesday 11 am	**Friday** 12 pm	**Friday** 12 pm	**Friday** 3 pm	**Friday** 1 pm	**Wednesday** 1 pm

Whilst more risk has been accrued on Tuesdays and Fridays than any other day of the week overall, some observations can be made that are unique to certain industries. There was a noticeable Monday slump and Saturday peak within Refrigerated, and a Sunday peak for both Refrigerated and Services/Utilities.



Client Results

Within the first 12 months utilising the DriveCam program, this client has been able to:

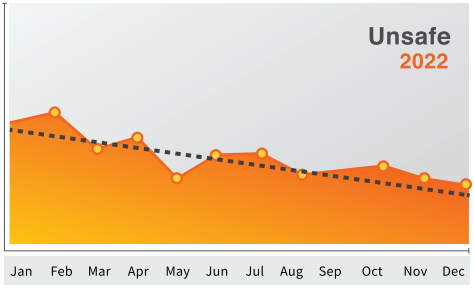
- Reduce the rate of Unsafe incidents by 59%;
- Reduce the rate of High-Risk incidents by 48% and;
- Reduce the likelihood of their drivers being involved in a preventable collision by 51%.

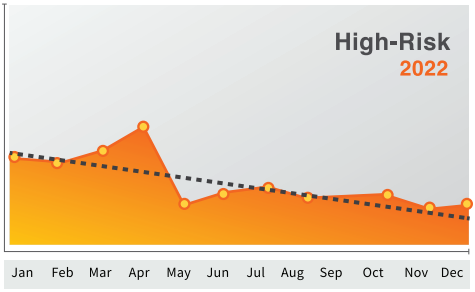
This fleet started with DriveRisk (now Optix) towards the end of 2021, and proved to be a perfect case study candidate to measure the impact that the DriveCam program has had over an entire year from beginning to end.

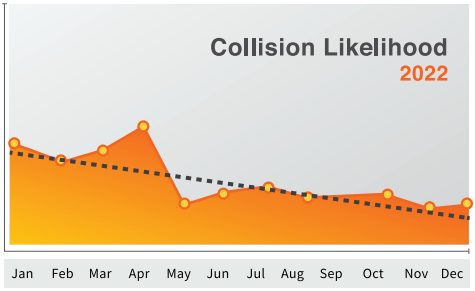
As is typical with the deployment of a new program, this fleet's risk profile steadily increased through the first few months, as events were captured exposing behaviours that required improvement.

Between April to May, there was a widespread push to engage the drivers with coaching, whereby a large proportion of risk was successfully addressed. From June to December, improvements and steady progress were sustained.

Furthermore, since deploying the DriveCam program, this fleet's protected vehicles have not recorded any major collisions.







Summary

This report has been compiled based on anonymised client data collected within the Lytx DriveCam program throughout 2022, providing insight into driving behaviours and habits within the Australian transport industry.

Over the last year, our product offerings have revolutionised how we can give clients unparalleled visibility and insights into driver and fleet behaviour. This insight has been powered by exciting technological advancements that have enabled us to gain a better understanding of our clients key concerns .

Our A.I product has evolved the way we detect, analyse, and communicate any risk-prone behaviours to the end user. We're able to do this both faster and more accurately than ever before. Our 2021 report revealed that Distracted Driving and Driving Fundamentals together made up 80% of High-Risk behaviour groups (67% and 13%, respectively). These figures remained similar in 2022, with 75% attributed to Distracted Driving & 12% focused on Driver Fundamentals - but our A.I capabilities allowed us to capture twice as many events featuring Driving Fundamental behaviors, and detect 2.5x more instances encompassing Distract - ed Driving .

While simply 'providing more data' does not necessarily rectify the problem, it does help the user build a more complete picture in a shorter amount of time, thus affording a more immediate response .

Holistically we've been able to uncover a far greater frequency of driving behaviours from within a richer data set, however it's interesting that proportionately, the prevalence of key behaviour types remains relatively similar year on year. The likelihood of a collision resulting from drivers repeatedly exhibiting these behaviours on the road is still relevant, however the obligation rests the end user to understand this information and proactively utilise it to implement positive change .

They say 'knowledge is power', and the knowledge we provide empowers transport operators to save the lives of their own drivers, along with others that they encounter on the road. Ultimately, our objective at Optix is to ensure that everyone gets safely home.

Nick Casalini
Business Analyst

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